

**Notice of Allowability**

Application No.

10/519,502

Applicant(s)

JEONG ET AL.

Examiner

Benjamin Kurtz

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Change of Address 8/1/05.
2. ☒ The allowed claim(s) is/are 1-5.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance             |
|  | 9. <input type="checkbox"/> Other _____   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Yoon Ham on 4/19/07.

2. The application has been amended as follows:

Claim 1, line 22 has been amended as follows:

water softening tank to extend ~~the water transport tube~~ the raw water feed pipe

The specification on page 7 line 4 has been amended as follows:

softening tank to extend ~~the water transport tube~~ the raw water feed pipe 114 to

The specification on page 11 line 15 has been amended as follows:

water softening tank 110 to extend ~~the water transport tube~~ the raw water feed pipe

### *Reasons for Allowance*

3. The following is an examiner's statement of reasons for allowance:

The closest prior art is Lyall US 3 385 441, Matsuoka JP 2000218266A, Carli US 6 436 293, Andre FR 2 069 826, Soeda JP 07-204641 and FR 2 283 864.

Lyall teaches a water softener having a water softening tank with a raw water feed pipe, a regeneration tank at the upper part of the tank. Lyall does not teach partitions, a temperature sensor, a control valve or a regeneration valve.

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Matsuoka teaches a water softener having a water softening tank with a raw water feed pipe, a regeneration tank at the upper part of the tank, a regeneration valve coupled to the raw water feed pipe. Matsuoka does not teach a control valve, partitions, or a temperature sensor.

Carli teaches a water softener having a water softening tank that is partitioned having a raw water feed pipe. Carli does not teach a regeneration tank, a control valve, a regeneration valve, or a temperature sensor.

Andre teaches a water softener having a water softening tank, a raw water feed pipe, a regeneration tank at an upper part of the tank, a control valve between the water softening tank and the regeneration tank, and a regeneration valve between the water softening tank and the regeneration tank. Andre does not teach partitions, or a temperature sensor.

Soeda teaches a water softener having multiple water softening tanks with a raw water feed pipe, a regeneration tank at the upper part of the water softening tank, a control valve, and a regeneration valve. Soeda does not teach the control and regeneration valves being within the regeneration tank, the regeneration valve being through the control valve, or a temperature sensor.

FR 2 283 864 teaches a water softener having a water softening tank having a raw water feed pipe, a regeneration tank at the upper part of the water softening tank, a control valve at an upper part of the raw water feed pipe and within the regeneration tank, a regeneration valve within the regeneration tank and coupled to the raw water feed pipe. '864 does not teach a temperature sensor, or the regeneration valve passing

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through the control valve. The '864 reference is the closest reference to the claimed invention but does not contain the specifically claimed configuration of the regeneration valve being through the control valve.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Kurtz whose telephone number is 571-272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Benjamin Kurtz  
Patent Examiner 1723  
4/20/07

  
Krishnam Menon  
Primary Examiner